No.



200500083

<u>THE UNITED STATES OF AMERICA</u>

TO ALL TO WHOM THESE; PRESENTS; SHALL, COME;

Hioneer Hi-Bred International, Inc.

MICCES, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE STATE TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR UNG IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE LURPOSE. OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'94M50'

In Jestimone Whereof, I have hereunto set my hand and caused the seal of the Plant Unviete Protection Office to be affixed at the City of Washington, D.C. this twenty-third day of June, in the year two thousand and five.

Allest:

Bengn

Commissioner

Plant Variety Protoction Offico Agricultural Marketing Scruice cetary of Gariculture

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426). APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE (Instructions and information collection burden statement on reverse) 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME 1. NAME OF OWNER Pioneer Hi-Bred International, Inc. VARIETY NAME 3. 94M50 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) 7300 N. W. 62rd Avenue P.O. Box 1004 Johnston, IA 50131 TELEPHONE (include area code) FOR OFFICIAL USE ONLY 5. 515-254-2638 PVPO NUMBER FAX (include area code) 515-253-2478 FILING DATE IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) 8. IF INCORPORATED, GIVE STATE OF INCORPORATION 1/18/2005 9. DATE OF INCORPORATION May 6, 1926 NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) 10. FILING AND EXAMINATION FEES: Daria Schmidt, Ph. D. 7300 N.W. 62rd Avenue P.O. Box 1004 Johnston ,IA 50131-1004 Steve Callistein, Exq 7100 N.W 62nd Avenue P.O Box 1000 Johnston, IA 50131-1000 : 3,652.00 CERTIFICATION FEE: TELEPHONE (Include area code) FAX (Include area code) 13. E-MAIL CROP KIND (Common Name 515-254-2638 515-253-2478 daria.schmidt@pioneer.com Soybean 18. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on 19. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF See Section 83(a) of the Plant Variety Protection Act) CERTIFIED SEED? X Exhibit A. Origin and Breeding History of the Variety YES (If "yes", answer items 20 and 21 below) X NO (If "no," go to item 22) X Exhibit B. Statement of Distinctness 20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? ☐ YES ☐ NO X Exhibit C. Objective Description of Variety

| d. X Exhibit D. Additional Description of the Variety (Optional) | IF YES, WHICH CLASSES? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|
| e. X Exhibit E. Statement of the Basis of the Owner's Ownership | П | | | | | |
| X Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be depositied and maintained in an approved public repository) | 21. DOES THE OWNER SPECIFY THAT THE CLASSES BE LIMITED AS TO NUMBER OF GENERATIONS? YES NO | | | | | |
| g. X Filing and Examination Fee (\$2,705), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office) | IF YES, SPECIFY THE NUMBER 1, 2, 3, etc. FOUNDATION REGISTERED CERTIFIED | | | | | |
| | (If additional explanation is necessary, please use the space indicated on the reverse.) | | | | | |
| 22. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U.S. OR OTHER COUNTRIES? | 23. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL, PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? | | | | | |
| □ _{YES} □ _{X NO} | ☐ X YES ☐ NO | | | | | |
| IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.) | IF YES, GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.) | | | | | |
| 24. The owners declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate. | | | | | | |
| The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variand is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. | | | | | | |
| and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Owner(s) is(are) informed that false representation herein can jeopardize protection and result in pena | | | | | | |
| SIGNATURE OF OWNER Ania H. Godanich | SIGNATURE OF OWNER | | | | | |
| Trong mod direct | | | | | | |
| NAME (Please print or type) Daria H. Schmidt | NAME (Please print or type) | | | | | |
| Data H. Common | | | | | | |
| CAPACITY OR TITLE DATE | CAPACITY OR TITLE DATE | | | | | |
| Director, Technology Integration and Associative Genetics | | | | | | |
| ST-470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces STD-470 (02-99) which is obsolete. (See reverse for instructions and information collection burden statement) | | | | | | |
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INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO. (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$2,705 (\$320 filing fee and \$2,385 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfiled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$320 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office Telephone: (301) 504-5518 FAX: (301) 504-5291

Homepage: http://www.ams.usda.gov/science/pvpo/pvp.htm

ITEM

18a. Give:

- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
- (2) the details of subsequent stages of selection and multiplication;
- (3) evidence of uniformity and stability; and
- (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
 - (1) identify these varieties and state all differences objectively;
 - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
 - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- 19. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 21. See Section 83 of the Act for the Contents and Term of Plant Variety Protection.
- 22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- 23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filling date.
- 21. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)
- 22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)
- 23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)
- U.S. Patent 4,940,835 issued to Shah et al. as per the Roundup Ready Gene in this variety

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or assignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

To avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, Building 306, Beltsville Agricultural Research Center--East, Beltsville, MD 20705. Telephone: (301) 504-8089.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

ST-470 (04-01) designed by the Plant Variety Protection Office with WordPerfect 6.0a. Replaces ST-470 (02-99) which is obsolete.

Exhibit A. Origin and Breeding History of the Variety

Soybean Variety 94M50

Variety 94M50 evolved from a cross made in the spring of 1999 in Puerto Rico with the following parentage:

XB46L99/T00593H117 XB46L99 = CX469C/9451 T00593H117 = S4260/9492*

*9492 is a commercial line with the Roundup Ready (40-3-2) gene

Variety 94M50 is an F3-derived line which was advanced to the F3 generation by modified single-seed descent. The F3 progeny row of 94M50 was grown in a plant row in Illinois in 2000. The line was grown in an additional season of yield trial testing in the winter of 2000/2001 in Argentina. Subsequently, 94M50 has undergone four years of extensive testing and purification and has been observed by the breeder to be uniform and stable for all plant traits from generation to generation, with no evidence of variants. On the basis of yield, Phytophthora resistance, soybean cyst nematode Race 3 resistance, and resistance to Roundup branded herbicides, variety 94M50 was assigned a commercial number.

The purification block was grown during the summer of 2002 in Illinois and 48 sublines were harvested. An approximately half (1/2) acre increase was grown in Argentina in the winter of 2002/03. Twenty-four (24) acres of parent seedstock (foundation seed equivalent) were grown in 2003 and approximately 535 acres of seedstock and production seed were grown in the summer of 2004.

Exhibit B. Statement of Distinctness

Soybean Variety 94M50

Variety 94M50 is most similar to variety Asgrow AG4402. Both varieties have white flowers, tawny pubescence, black hilia, resistance to Races 3 of Soybean cyst nematode, and resistance to Roundup branded herbicides. However, 94M50 has resistance to *Phytophthora megasperma* due to the presence of the Rps1c gene whereas AG4402 has resistance to *Phytophthora megasperma* due to the presence of the Rps1k gene. The product description information for Asgrow AG4402 is included as a reference.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this collection of information is (0581-0055). The time required to complete this information collection is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data ources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, and marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact the USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326 DW, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY PLANT VARIETY PROTECTION OFFICE **BELTSVILLE, MD 20705**

EXHIBIT C (Soybean)

OR IECTIVE DESCRIPTION OF VARIETY

| | | ODJ. | SOYBEAN (Glyc | ine max (L.) Mer | r.) | · |
|-----------------------------------------|----------------------|------------------------|-----------------------|----------------------------------------|---------------------|------------------------------------------------------|
| NAME OF APPLICANT | • • • | | | ······································ | | FOR OFFICIAL USE ONLY |
| Pioneer Hi-Bred, Interna | | | | | | PVPO NUMBER |
| ADDRESS (Street and No | | e, and Zip Cod | | | G C | |
| 7300 N.W. (BT: 1 | 1/51/2005) | | | | | 00300085 |
| P.O Box 1004 Johnston, IA 50131-1004 | | | | | | VARIETY NAME 94M50 |
| Tolubbon, At 20121 1001 | | + | | | | 941420 |
| | | | | | | TEMPORARY OR EXPERIMENTAL DESIGNATION |
| | - | | | | | <xb44d847 (bt:1="" 2005)<="" 31="" td=""></xb44d847> |
| | | | | | | Per applicant |
| PLEASE READ AL | L INSTRUCTIONS | S CAREFULLY: Place | e the appropriate nur | nber that describes t | he varietal charac | ter of this variety in the boxes below. |
| Place a zero in the f | irst box (e.g. | 9 9 9 | or 0 9) | when number is ei | ther 99 or less or | 9 or less respectively. Data for |
| quantitative | | 9 9 9 | or 0 9 1 | | | |
| • | ٠ | | <u> </u> | • | | |
| plant characters cho | ould be based on a n | ninimum of 100 plants | . Comparative data | should be determined | l from varieties er | tered in the same trial. Royal |
| Horticulutral Societ | y or any recognized | color standard may h | e used to determine | plant colors; designat | te system used: | |
| | | iety; lack of response | | | - | ŕ |
| • | | , , | ,, p. og. ob. | . Jour approximation | | |
| A. MORPHO | OLOGY | | | | | |
| · | JEOG1 | | | | | |
| Seed Shape: | | | | | | |
| 1 = | = Spherical | | 2 = Sph | nerical - Flattene | d | |
| | /W, L/T, and T/ | W ratios < 1.2) | (L/W r | atio > 1.2 ; L/T ra | tio < 1.2) | |
| 3 - | = Elongated | | 4 – Flo | ngate - Flattened | 1 | |
| | T ratio . 1.2; T/ | W ratio < 1.2) | | tio > 1.2;T/W ra | | |
| | • | ** Tallo < 1.2.) | (141.14 | 1110 > 1.2, 17 W Ta | 110 > 1.2) | • |
| Seed Coat Co | olor: | | | | | |
| 1 | | | | | | |
| | 1 = Yellow | 2 = Green | 3 = Brown | 4 = Black | 5 = Other | |
| Seed Coat Lu | ster: | | | | (Please Sp | pecify |
| | | | | | | • |
| 1 | 1 = Dull | 2 = Shiny | • | | | |
| <u> </u> | | | | | | |
| Seed Size: | | | | | | |
| 170 | | | | | | |
| 17.8 | grams/100 se | eds | | • | | |
| IIIImaa Calaaa | | | | | | |
| Hilum Color: | | | | | | |
| 6 | 1 = Buff | 2 = Yellow | 3 = Brown | 4 = Gray | 5 = Imper | fect Black |
| | 6 = Black | 7 – Other (P) | lease Specify) | | _ | |

A. MORPHOLOGY (Continued)

Cotyledon Color:

1 = Yellow

2 = Green

Seed Protein Peroxidase Activity:

2

1 = Low

2 = High

Hypocotyl Color:

1

1 = Green ('Evans' or 'Davis')

2 = Green with Bronze **Bands below Cotyledons** ('Woodworth' or 'Tracy')

('Beeson' or 'Pickett 71')

3 = Light Purple below Cotyledons

4 = Dark Purple extending to unifoliolate leaves

('Hodgson', 'Coker', or

Leaflet Shape:

1 = Lanceolate

2 = Oval

3 = Ovate

4 = Other (Please Specify)

Flower Color:

1

1 = White

2 = Purple

3 = White with a Purple Throat

Pod Color:

2

1 = Tan

2 = Brown

3 =Black

Pubescence Color:

2

1 = Gray

2 = Brown (Tawny)

3 = Light Tawny

Plant Habit:

3

1 = Determinate

2 = Semi - Determinate

3 =Indeterminate

4 =Intermdeiate

Maturity Group:

1 = 000

2 = 00

3 = 0

4 = I

5 = II

6 = III11 = VIII 7 = IV

8 = V

9 = VI

10 = VII

12 = IX

13 = X

14 = XI

15 = XII

Maturity Subgroup:

Please enter a value from 0 - 9

B. DISEASE REACTION

0 = Not Tested

1 = Susceptible

2 = Resistant

3 = Tolerant

Bacterial

Bacterial Pustule (Xanthomonas campestri pv. glycines (Nakano) Dye)

Bacterial Blight Pseudomonas syringa pv. glycinea (Coerper) Young, Dye, and Wilkie)

0

Wildfire Blight Pseudomonas syringa pv. tabaci (Wolf_Foster) Young, Dye, Wilkie)

| ٠. | ASE REACTI | ON (Co | ninuea) 🔻 | - 110t Lesteu | 1 – 503 | серион | e 2 – Resistant | J = 1. | oici ani |
|------------|-----------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------|---------------|-------------------|----------|--------------------|--------|----------|
| Funga 1 | | | | | | | | | |
| | Frogeye Leaf Spot (Cercospora sojina Hara) | | | | | | | | |
| 2 | race 1 | 0 | race 2 | | 0 | race | 3 | 0 | race 4 |
| 0 | race 5 | 0 | race 6 | | 0 | Oth | e (Please Specify) | | |
| 0 | Target Spot (Co | Target Spot (Corynespora cassiicola (Berk. Curt.) Wei) | | | | | | | |
| 0 | Downey Mildew | (Peronosp | ora trifoliorum | var. manchu | <i>rica</i> (Naum | ı.) Syd. | ex Gäum) | · | |
| 0 | Powdery Mildey | w (Microsp | haera diffusa C | ke. and Pk.) | | ÷ | | | |
| 0 | Brown Stem Rot (Phialophora gregata (Allington Chamberlain) W. Gams.) | | | | | | , | | |
| 0 | O Stem Canker (Diaporthe phaseolorum (Cke. and Ell.) Sacc. var. caulivora Athow and Caldwell) | | | | | | | | |
| 1 | Pod and Stem Blight (Diaporthe phaseolorum (Cke. and Ell.) Sacc. var. sojae (Lehman) Wehm. | | | | | | | | |
| 0 | Purple Seed Stain (Cercospora kikuchii (T. Matsu. and Tomoyasu) Gardener) | | | | | | | | |
| 1 | 1 Rhizoctonia Root Rot (Rhizoctonia solani Kühn) | | | | | | | | |
| Phytop | nthora Root Rot (| Phytophthe | ora megaspermo | Drechs. f. | sp. glycine | a (Kua | n Erwin)) | | |
| 0 | race 1 | 0 ra | ce 8 | 0 race 1 | 5 | 0 | race 22 | ÷ | |
| 0 | race 2 | 0 ra | ce 9 | 0 race 1 | 6 | 0 | race 23 | | |
| 0 | race 3 | 0 ra | ce 10 | 0 race 1 | 7 | 0 | race 24 | | |
| 1 | race 4 | 0 ra | ce 11 | 0 race 1 | 8 | 0 | race 25 | | |
| 0 | race 5 | 0 ra | ce 12 | 0 race 19 | 9 | 0 | race 26 | | |
| 0 | race 6 | 0 ra | ce 13 | 0 race20 |) | 0 | Other (Please Spec | ify) | |
| 2 | race 7 | 0 ra | ce 14 | 0 race 2 | 1 | | | | |
| 1 | Bud Blight (Tobacco Ringspot Virus) | | | | | | | | |
| 1 | Yellow Mosaic (bean Yellow Mosaic Virus) | | | | | | | | |

| B. DIS | EASE REACTIONS (Continue | ed) $0 = Not Tested$ | 1 = Susceptible | 2 = Resistant | 3 = Tolerant | |
|-----------|---------------------------------------------|----------------------|----------------------------|---------------|--------------|---|
| Funga | al Cowpea Mosaic (Cowpea Chlorotic | Virus) | | | | |
| 1 | Pod Mottle (Bean Pod Mottle Virus | | | | | |
| |] | | | | | |
| 1 Nema | Seed Mottle (Soybean Mosaic Virus | s) | · | | | |
| | an Cyst Nematode <i>(Heterodera glycine</i> | es Ichinohe) | | | | |
| 1 | race 1 0 race 4 | 0 racé 9 | | | • | |
| 1 | race 2 1 race 5 | 0 race 14 | I | | | |
| 2 | race 3 0 race 6 | 0 Other | (Please Specify) | | | |
| 0 | Lance Nematode (Hoploaimus colu | umbus Sher) | | | | - |
| 0 | Southern Root Knot Nematode (Mei | loidogyne incognita | (Kofoid and White | e) Chitwo | | · |
| 0 | Northern Root Knot Nematode (Mei | loidogyne hapla Chi | twood) | | | |
| 0 | Peanut Root Knot Nematode (Meloi | dogyne arenaria (No | eal) Chitwood) | | | |
| 0 | Reniform Nematode (Rotylenchus r | eniformus Linwood | and Olivera) | | | |
| 0 | Javanese Nematode (Meloidogyne jo | vanica (Treub) Ch | itwood) | | | |
| 0 | Other Nematode (Please Specify) | | | | | |
| . PHY | /SIOLOGICAL RESPONSES | 0 = Not Tested | 1 = Susceptible | 2 = Resistant | 3 = Tolerant | |
| 1 | Iron Chlorosis on Calcareous Soil | · | • | | | |
| 0 | Phosphorus | 0 0 | her (<i>Please Specij</i> | (y) 0 | | |
| 0 | Boron | | | | | |
| 0 | Aluminum | | | | | |
| 0 | Salt | | | | | |
| | Duomohé | | | | | |

D. INSECT REACTIONS 0 = Not Tested 1 = Susceptible 2 = Resistant **Fungal** Mexican Bean Beetle (Epilachna varivestis Mulsant) O Potato Leaf Hopper (Empoasca fabae (Harris)) 0 Other (Please Specify) E. HERBICIDE REACTIONS 0 = Not Tested1 = Susceptible 2 = Resistant Metribuzin Bentazone Sulfonylurea 2 **Glyphosate** 0 Glufosinate 0 Pendimethalin 0 Other (Please Specify) 0 F. TRANSGENIC COMPOSITION Has the development of the subject variety included the insertion of genetic material from an organism other than a soybean, or, the removal of genetic material from the application variety? If yes, please complete the following infomation requests*. Use additional pages if necessary. 1. Please state the vector's name: 2. Please state the vector components: 3. Please describe the genetic material successfully transferred into the subject variety: 4. Please describe the insertion protocol: A literature citation(s) explaining the four information requests above may be an acceptable alternative to completion of the

Development, Identification, and Characterization of a Glyphosate-Tolerant Soybean Line. 1995. Crop Science. 35:1451-1461 G. BIOCHEMICAL MARKERS

Please describe any biochemical information here, which you believe will be helpful in further describing the subject variety (e.g. Simple Sequences Repeats, Restriction Fragment Length Polymorphisms, Isozymic Characterization). Use additional pages if necessary.

"Transgenic Composition" portion of this form. This section is fully addressed in the following publication. Specific details of

the vector components and insert elements are summarized in Figure 1 and Table 1 on page 1453. Padgette, S.R. et al.

H. COMMENTS

Exhibit D. Additional Description of the Variety

Soybean Variety 94M50

In Exhibit C we have identified variety 94M50 as susceptible to bacterial blight, brown spot, pod and stem blight, rhizoctonia root rot, bud blight, yellow mosaic, cowpea mosaic, pod mottle and seed mottle.

This does not mean that variety 94M50 is any worse for these problems than other varieties of similar maturity. Rather, we do not consider 94M50 to be immune to these problems. Therefore, we have chosen to be conservative and have identified the line as "susceptible".

Variety 94M50 is a mid Group 4 variety. If Group 4 varieties are divided into tenths, the relative maturity of 94M50 is 4.5.

| REPRODUCE LOCALLY. Include form number and edition date on a | | ORM APPROVED - OMB No. 0581-005 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE | The following statements are made in 1974 (5 U.S.C. 552a) and the Paper | |
| EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP | Application is required in order to det certificate is to be issued (7 U.S.C. 2 confidential until the certificate is issued. | 421). The information is held |
| 1. NAME OF APPLICANT(S) | 2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER | 2. VARIETY NAME |
| Pioneer Hi-Bred International, Inc | XBAADOA | 94M50 |
| 4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country) | 5. TELEPHONE (Include area code) | 6. FAX (Include area code) |
| 7300 N.W. 62 nd Avenue P.O. Box 1004 Johnston, IA 50131-1004 | 515-254-2638 | 515-253-2478 |
| | 7. PVPO NUMBER 200 | 5000 83 |
| 8. Does the applicant own all rights to the variety? Mark an "X" in the lf no, please explain. | he appropriate block. | X YES NO |
| m ne, proues expraini | | |
| 9. Is the applicant (individual or company) a U.S. National or a U.S. | based company? | |
| If no, give name of country | y. | X YES NO |
| 10. Is the applicant the original owner? | If no, please answer one of the fol | lowing: |
| a. If the original rights to variety were owned by individual(s), is | (are) the original owner(s) a U.S. Nation | al(s)? |
| YES NO If no, give name of coun | try | |
| b. If the original rights to variety were owned by a company(les | s), is (are) the original owner(s) a U.S. ba | sed company? |
| YES NO If no, give name of coun | try | |
| 11. Additional explanation on ownership (If needed, use the reverse | e for extra space): | |
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| Please Note: | | |
| Plant variety protection can only be afforded to the owners (not licer | nsees) who meet the following criteria: | |
| If the rights to the variety are owned by the original breeder, that national of a country which affords similar protection to nationals | | |
| If the rights to the variety are owned by the company which employ nationals of a UPOV member country, or owned by nationals of a genus and species. | | |
| 3. If the applicant is an owner who is not the original owner, both the | e original owner and the applicant must r | neet one of the above criteria. |
| The original breeder/owner may be the individual or company who catched for definitions. | directed the final breeding. See Section | 41(a)(2) ot the Plant Variety Protection |
| According to the Paperwork Reduction Act of 1995, no persons are required to respond to or this information collection is 0581-0055. The time required to complete this information nstructions, searching existing data sources, gathering and maintaining the data needed, | collection is estimated to average 6 minutes per resp | onse, including the time for reviewing the |
| The U.S. Department of Agriculture (USDA) prohibits discrimination in its programs on the status. (Not all prohibited bases apply to all programs). Persons with disabilities who requixentact the USDA's TARGET Center at 202-720-2600 (voice and TDD). | basis of race, color, national origin, sex, religion, age | , disability, political beliefs, and marital or familial |

To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD). USDA is an equal opportunity employer.

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